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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/542,356	03/29/2006	Thomas Bertin-Mourot	274867US0PCT	2688
22850	7590	02/06/2007	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			DO, ROBERT C	
		ART UNIT	PAPER NUMBER	
		2851		
SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE		
3 MONTHS	02/06/2007	PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/542,356	BERTIN-MOUROT ET AL.	
	Examiner Robert C. Do	Art Unit 2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 29 March 2006.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-19 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____.   | 6) <input type="checkbox"/> Other: _____.                         |

**DETAILED ACTION**

***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the all claimed subject matter in claims 1-19 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Objections***

Claim 2 is objected to because of the following informalities: Claim 2 suggests that the rear projection screen has a resolution of  $5*10^3$  to  $1*10^5$  dpi, but the examiner believes that one in the art would believe that a rear projection screen does not determine the resolution that the image would be, but rather the imaging source. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 3, 5, and 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Iwata et al. (US 6,327,088).

Regarding claim 1 Iwata et al. discloses, at least a first substrate (Fig. 1, 12) joined to a scattering layer (18) producing a subsurface effect, said layer being suitable for obtaining a viewing angle of less than or equal to 180° on both faces of the said layer.

Regarding claim 3 Iwata et al. discloses, wherein the scattering layer (Fig. 3, 18) is deposited on one of the faces of the first substrate (12) and a lamination interlayer (34) is deposited on the opposite face of the said first substrate, the said interlayer in turn being joined to a second substrate (36).

Regarding claim 5 Iwata et al. discloses, wherein the scattering layer (18) is deposited on one of the faces of a first substrate (12), the said first substrate being in turn joined to a second substrate (36) so as to form a double-glazing unit.

Regarding claim 14 Iwata et al. discloses, wherein at least one of the first, second and third substrates is a glass substrate. (Column 6, lines 53-55)

Regarding claim 15 Iwata et al. discloses, wherein at least one of the first, second and third substrates is a transparent substrate based on a polymer. (Column 6, lines 53-55)

Regarding claim 16 Iwata et al. discloses, wherein at least one of the first, second and third substrates includes a coating having another functionality, especially a coating with a low-emissivity function or an antistatic, antimisting, antifouling or antireflection function. (Column 9 lines 39-42 describes and antireflection function)

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iwata et al. in view of Yoshida et al. (US 6,421,181).

Regarding Claim 4, Iwata et al.'s teachings have been discussed above.

Iwata et al. does not teach that the second substrate is a tinted substrate.

However Yoshida et al teaches a substrate that is tinted. (Column 5; lines 13-32 describe a tinted layer and its use in a screen)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the second layer in the screen of Iwata et al. tinted for the purpose of preventing the deterioration of contrast in images due to external light.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iwata et al. in view of Gehring et al. (US 2002/0163722).

Regarding Claim 6, Iwata et al.'s teachings have been discussed above. Iwata et al. does not teach a peripheral bead separating that face of the first substrate.

However, Gehring et al. teaches a peripheral bead (Fig. 4, 44) separating that face of the first substrate (See Fig. 4 and paragraph [0103]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add a peripheral bead separating that face of the first substrate on to the film of Iwata et al. for the purpose of collecting light and focus it to relatively small spots near the area of the beads. (Gehring, paragraph [0008])

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iwata et al. in view of Toda et al. (US 2006/0033991).

Regarding Claim 7, Iwata et al.'s teachings have been discussed above.

Iwata et al. does not teach wherein the scattering layer consists of elements comprising particles and a binder, the binder allowing the particles to be mutually agglomerated.

However Toda et al. teaches wherein the scattering layer (Fig. 98) consists of elements comprising particles (2 through 4) and a binder (13), the binder allowing the particles to be mutually agglomerated (Paragraph [0162]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the scattering layer of Iwata et al. consist of elements comprising particles and a binder as taught by Toda for the purpose of moderating the directivity of light reflected by the screen and uniforming the luminosity over the entire screen (Toda et al. Paragraph [0037]).

Claims 8, 9, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwata et al. in view of Toda et al. further in view of Kaminsky et al. (US 7,046,439).

Regarding Claim 8, Iwata et al. as modified by Toda et al.'s teachings have been discussed above.

Iwata et al. as modified as by Toda et al. does not teach that the particles are metal or metal oxide particles.

However, Kaminsky et al. teaches that the particles are metal or metal oxide particles. (Column 2, lines 1-13 teach particles using metal oxide)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the particles of Toda et al. out of a metal oxide

because they have high refractive indexes making them desirable for scattering light to increase contrast.

Regarding Claim 9, Iwata et al. as modified by Toda et al.'s teachings have been discussed above.

Iwata et al. as modified as by Toda et al. does not teach wherein the particles are chosen from silicon, aluminium, zirconium, titanium and cerium oxides, or a mixture of at least two of these oxides.

However, Kaminsky et al. teaches wherein the particles are chosen from silicon, aluminium, zirconium, titanium and cerium oxides, or a mixture of at least two of these oxides. (Column 11, lines 46-55 teach of silica, alumina, zinc, titania and mixtures of them)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the particles of Toda et al. out of silicon, aluminium, zirconium, titanium and cerium oxides, or a mixture of at least two of these oxides because they have high refractive indexes making them desirable for scattering light to increase contrast.

Regarding Claim 10, Iwata et al. as modified by Toda et al.'s teachings have been discussed above.

Iwata et al. as modified as by Toda et al. does not teach wherein the particle size is between 50 nm and 1  $\mu\text{m}$ .

However, Kaminsky et al. teaches wherein the particle size is between 50 nm and 1  $\mu$ m. (Abstract teaches that the particles size is less than 100nm)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the particles of Toda et al. a size that is in between 50 nm and 1  $\mu$ m because they are less visible when in that size range when compared to larger particles used in other screens.

Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwata et al. and Toda et al. in view of Kaminsky et al. further in view of Etori et al. (US 2001/0005282)

Regarding Claim 11, Iwata et al. and Toda et al. as modified by Kaminsky et al.'s teachings are shown above.

Iwata et al. and Toda et al. as modified by Kaminsky et al. does not teach wherein the binder essentially consists of a glass frit or melting agent.

However, Etori et al. teaches wherein the binder essentially consists of a glass frit or melting agent. (paragraph [0033])

Regarding Claim 12, Iwata et al. and Toda et al. as modified by Kaminsky et al.'s teachings are shown above.

Iwata et al. and Toda et al. as modified by Kaminsky et al. does not teach wherein the glass frit or melting agent is based on a mixture of zinc oxide, boron oxide, sodium oxide and silica. (paragraph [0035])

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the binder of Toda et al. out of a glass frit where the glass frit is bases on a mixture of zinc oxide, boron oxide, sodium oxide and silica for the purpose of obtaining a high see-through property and becomes suitable for the screen. (Etori et al. paragraph [0033])

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iwata et al. in view of Toshima et al. (US 5,831,774).

Regarding Claim 13, Iwata et al.'s teaching are shown above.

Iwata et al. does not teach wherein the thickness of the scattering layer is between 0.5 and 5  $\mu\text{m}$ .

However Toshima et al. teaches wherein the thickness of the scattering layer is between 0.5 and 5  $\mu\text{m}$ . (column 3, lines 35-45 teach the thickness of the scattering layer 32 a thickness of 1-30  $\mu\text{m}$ .)

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the thickness scattering layer of Iwata et al. between 0.5 and 5  $\mu\text{m}$  as taught by Toshima et al. for the purpose of lightening the film as opposed to greater thicknesses.

Claim 17, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwata et al. in view of Choi (US 2006/0012876).

Regarding Claim 17 and 18, Iwata et al.'s teachings are shown above.

Iwata et al. does not teach a partition defining a wall between two different volumes, it being possible for each to benefit from information broadcast on either side of the said partition.

However Choi et al teaches a partition defining a wall (Fig 6, wall 1) between two different volumes (E and D), it being possible for each to benefit from information broadcast on either side of the said partition (Image projected on both sides).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the film of Iwata et al. in the projection system of Choi containing a partition defining a wall between two different volumes and it being possible for each to benefit from information broadcast on either side of the said partition for the purpose of being able to diffuse and distribute light more uniformly on both sides of the screen of Choi.

Regarding Claim 19, Iwata et al.'s teachings are shown above.

Iwata et al. does not teach a method for broadcasting information comprising backprojecting or projecting broadcast information on either side of the separating partition defining a wall between two different volumes.

However Choi et al teaches a method for broadcasting information comprising backprojecting or projecting broadcast information on either side of the separating partition defining a wall between two different volumes. (See Fig. 6 image projected on both sides from projector 5)

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the method of or projecting broadcast information on either side of the separating partition defining a wall between two different volumes as taught by Choi with the screen of Iwata et al. for the purpose of being more flexible for the user to be able to arrange the screen and projector.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert C. Do whose telephone number is (571)272-1387. The examiner can normally be reached on Monday Through Friday, 8am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diane Lee can be reached on (571)272-2399. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RCD

Rodney Fuller  
Primary Examiner

